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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,375	10/28/2005	Michael John Christensen	08059.0013	4788
22852	7590	09/22/2008		
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER MARX, IRENE	
			ART UNIT	PAPER NUMBER
			1651	
			MAIL DATE	DELIVERY MODE
			09/22/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/529,375

**Applicant(s)**

CHRISTENSEN ET AL.

**Examiner**

Irene Marx

**Art Unit**

1651

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 July 2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 and 30-33 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 1-7 is/are allowed.  
6) ☒ Claim(s) 30-33 is/are rejected.  
7) ☒ Claim(s) 8 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/CIS)  
4) ☐ Interview Summary (PTO-413)  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_  
Paper No(s)/Mail Date \_\_\_\_\_

### DETAILED ACTION

The amendment filed 7/21/08 is acknowledged. Claims 1-8 and 30-33 are being considered on the merits.

To clarify the invention, it is recommended that the term "respectively" be added after the recitation of accession numbers in claim 1.

The rejection under 35 U.S.C. 112, first paragraph regarding deposit is withdrawn in view of applicant's averments.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 32-33 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

No basis or support is found in the present specification for a culture as claimed in claim 32. Applicant asserts that support is provided at Table 2. However, it is unclear how the material in Table 2 relates specifically to the claimed invention.

In addition, the statement at page 14, lines 22-27 reads:

"Table 2 shows that the endophytes of this invention can be distinguished from other groups of *Neotyphodium* endophytes by the number of alleles observed and the apparent sizes of such alleles. Thus all strains of this invention share a B11 allele of size c. 128 base pairs and a second B11 allele within the size range c. 192 to 200bp. They also share with other *N. coenophialum* strains up to three B10 alleles within the range c.154 to 185bp."

There is no clear indication at Table 2 of a culture of an endophyte wherein "the endophyte has three B10 alleles, each within the range of 154 to 185 base pairs in size".

Insertion of the limitation of the new genus wherein "the endophyte has three B10 alleles, each within the range of 154 to 185 base pairs in size" does not have support in the as-filed specification. The insertion of this limitation is a new concept because it neither has literal

support in the as-filed specification by way of generic disclosure, nor are there specific examples of the newly limited genus which would show possession of the concept of the use of endophytes wherein "the endophyte has three B10 alleles, each within the range of 154 to 185 base pairs in size".. There is no clear exemplification of this genus in Table 2 which not sufficient support for the new genus wherein "the endophyte has three B10 alleles, each within the range of 154 to 185 base pairs in size". This is a matter of written description, not a question of what one of skill in the art would or would not have known. The material within the four corners of the as-filed specification must lead to the generic concept. If it does not, the material is new matter. Declarations and new references cannot demonstrate possession of a concept after the fact. Thus, the insertion of wherein "the endophyte has three B10 alleles, each within the range of 154 to 185 base pairs in size" is considered to be the insertion of new matter for the above reasons.

Therefore, this material constitutes new matter and should be deleted.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 30-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 30 is confusing in that the species of the endophyte claimed is not set forth. It is recommended that "of *Neotyphodium coenophialum*" be added after "culture" at line 1.

Claim 31 is vague, indefinite and confusing in that the material intended to be encompassed by *Neotyphodium coenophialum*" wherein "the endophyte has three B10 alleles, each within the range of 154 to 185 base pairs in size".

Claims 8, 31, 33 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 32-33 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Waller *et al.* (2000. Tall Fescues With Novel Endophytes in Tennessee. In: Proceedings of 4th International Neotyphodium/Grass Interactions Symposium. Eds. V.H. Paul and P.D. Dapprich)

The claims are drawn to *Neotyphodium coenophialum* strains which have certain alleles.

The cited reference discloses *Neotyphodium coenophialum* strains which appear to be identical to at least one of the presently claimed strain (see, e.g., Results, Tables I and II) since they are non-toxic for animals in conjunction with grasses. The referenced microorganisms appear to be identical to at least one of the presently claimed strain and are considered to anticipate the claimed microorganism since they are disclosed as being found to live in similar plant tissue, are of the same species as that of the microorganisms claimed and are taught to be effective for the same purpose. Consequently, the claimed strains appear to be anticipated by the reference, even though the presence of the required alleles is not disclosed.

In the alternative, even if the claimed microorganisms are not identical to at least one the referenced microorganism with regard to some unidentified characteristics, the differences between that which is disclosed and that which is claimed are considered to be so slight that the referenced microorganisms are likely to inherently possess the same characteristics of the claimed microorganism particularly in view of the similar characteristics which they have been

shown to share. Thus the claimed strains would have been obvious to those skilled in the art within the meaning of USC 103.

Accordingly, the claimed invention as a whole was at least *prima facie* obvious, if not anticipated by the reference, especially in the absence of evidence to the contrary.

#### ***Response to Arguments***

Applicant's arguments as they pertain to the above rejection have been fully considered but they are not deemed to be persuasive.

The Patent and Trademark Office is not equipped to conduct experimentation in order to determine whether or not applicants' cultured strains differ and, if so, to what extent, from the strains discussed in the references regarding their genotypic properties. See also the new matter rejection *supra*.

Therefore the rejection is deemed proper and it is adhered to.

Claims 32-33 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Smith *et al.*(X)

The claims are drawn to *Neotyphodium coenophialum* strains which have certain alleles

The cited reference discloses *Neotyphodium coenophialum* strains which appear to be identical to at least one of the presently claimed strain (see, e.g., last page, col. 2) since they are non-toxic for animals in conjunction with grasses. The referenced microorganisms appear to be identical to at least one of the presently claimed strain and are considered to anticipate the claimed microorganism since they are disclosed as being found to live in similar plant tissue, are of the same species as that of the microorganisms claimed and are taught to be effective for the same purpose. Consequently, the claimed strains appear to be anticipated by the reference, even though the presence of the required alleles is not disclosed.

In the alternative, even if the claimed microorganisms are not identical to at least one the referenced microorganism with regard to some unidentified characteristics, the differences between that which is disclosed and that which is claimed are considered to be so slight that the referenced microorganisms are likely to inherently possess the same characteristics of the claimed microorganism particularly in view of the similar characteristics which they have been shown to share. Thus the claimed strains would have been obvious to those skilled in the art within the meaning of USC 103.

Accordingly, the claimed invention as a whole was at least prima facie obvious, if not anticipated by the reference, especially in the absence of evidence to the contrary.

***Response to Arguments***

Applicant's arguments as they pertain to the above rejection have been fully considered but they are not deemed to be persuasive.

The Patent and Trademark Office is not equipped to conduct experimentation in order to determine whether or not applicants' cultured strains differ and, if so, to what extent, from the strains discussed in the references regarding their genotypic properties. See also the new matter rejection *supra*.

Therefore the rejection is deemed proper and it is adhered to.

Claims 32-33 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Matthews *et al.* (W)

The claims are drawn to *Neotyphodium coenophialum* strains which have certain alleles

The cited reference discloses *Neotyphodium coenophialum* strains which appear to be identical to at least one of the presently claimed strain (see, e.g., Table 1) since they are non-toxic for animals in conjunction with grasses. The referenced microorganisms appear to be identical to at least one of the presently claimed strain and are considered to anticipate the claimed microorganism since they are disclosed as being found to live in similar plant tissue, are of the same species as that of the microorganisms claimed and are taught to be effective for the same purpose. Consequently, the claimed strains appear to be anticipated by the reference, even though the presence of the required alleles is not disclosed.

In the alternative, even if the claimed microorganisms are not identical to at least one the referenced microorganism with regard to some unidentified characteristics, the differences between that which is disclosed and that which is claimed are considered to be so slight that the referenced microorganisms are likely to inherently possess the same characteristics of the claimed microorganism particularly in view of the similar characteristics which they have been shown to share. Thus the claimed strains would have been obvious to those skilled in the art within the meaning of USC 103.

Accordingly, the claimed invention as a whole was at least prima facie obvious, if not anticipated by the reference, especially in the absence of evidence to the contrary.

***Response to Arguments***

Applicant's arguments have been fully considered but they are not deemed to be persuasive.

Applicant argues that this reference is not prior art. However, the priority document does not provide basis or support for a culture as claimed in claim 32.

The Patent and Trademark Office is not equipped to conduct experimentation in order to determine whether or not applicants' cultured strains differ and, if so, to what extent, from the strains discussed in the references regarding their genotypic properties. See also the new matter rejection *supra*.

Therefore the rejection is deemed proper and it is adhered to.

Claims 32-33 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bouton *et al.*, Agronomy Journal, vol. 94, pages 567-574 (2002)

The claims are drawn to *Neotyphodium coenophialum* strains which are non-toxic for animals in conjunction with grasses.

The cited reference discloses *Neotyphodium coenophialum* strains which appear to be identical to at least one of the presently claimed strain (see, e.g., Table 1) since they are non-toxic for animals in conjunction with grasses. The referenced microorganisms appear to be identical to at least one of the presently claimed strain and are considered to anticipate the claimed microorganism since they are disclosed as being found to live in similar plant tissue, are of the same species as that of the microorganisms claimed and are taught to be effective for the same purpose. Consequently, the claimed strains appear to be anticipated by the reference, even though the presence of the required alleles is not disclosed.

In the alternative, even if the claimed microorganisms are not identical to at least one the referenced microorganism with regard to some unidentified characteristics, the differences between that which is disclosed and that which is claimed are considered to be so slight that the referenced microorganisms are likely to inherently possess the same characteristics of the



claimed microorganism particularly in view of the similar characteristics which they have been shown to share. Thus the claimed strains would have been obvious to those skilled in the art within the meaning of USC 103.

Accordingly, the claimed invention as a whole was at least prima facie obvious, if not anticipated by the reference, especially in the absence of evidence to the contrary.

***Response to Arguments***

Applicant's arguments as they pertain to the above rejection have been fully considered but they are not deemed to be persuasive.

The Patent and Trademark Office is not equipped to conduct experimentation in order to determine whether or not applicants' cultured strains differ and, if so, to what extent, from the strains discussed in the references regarding their genotypic properties. See also the new matter rejection *supra*.

Therefore the rejection is deemed proper and it is adhered to.

Claims 1-8 are allowable over the art of record the properties of the strains as claimed differ from those of the prior art. Applicant's arguments are persuasive in this regard.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irene Marx whose telephone number is (571) 272-0919. The examiner can normally be reached on M-F (6:30-3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1651

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Irene Marx/  
Primary Examiner  
Art Unit 1651